

# COMPUTER SCIENCE B.S.

## Four Year Plan

**Disclaimer:** This *sample* Four Year Plan is provided as a guide for the recommended sequencing of courses. Vanguard University requires that students complete a minimum of 120 units of required course work as outlined on the Requirements tab in order to receive a Bachelor of Arts, Bachelor of Music, Bachelor of Science, or Bachelor of Science in Nursing degree. It is the student's responsibility to confirm with the department the course rotation before enrolling in courses. If applicable, please note the footnotes at the bottom of the page for additional information related to courses listed in a particular year and term. Questions, contact the Department of Physical Sciences and Applied Mathematics.

**Study Abroad Participation:** Students interested in participating in the university's Study Abroad programs are encouraged to reach out to the Global Education and Outreach Office ([studyabroad@vanguard.edu](mailto:studyabroad@vanguard.edu)) for more information and collaboration in their academic course planning. Students using Education and Training Benefits through the U.S. Department of Veteran Affairs are encouraged to also reach out to the School Certifying Official ([veteranscertifyingofficial@vanguard.edu](mailto:veteranscertifyingofficial@vanguard.edu)) for more information regarding how benefits can be applied.

Course	Title	Units
<b>Year 1 Term 1</b>		
CSCI-110C	Introduction to Computer Science	4
MATH-180C	Calculus 1	4
CORE-CSTN	Cornerstone	1
CORE-ENGL1	Composition Requirement	3
CORE-THEO2	NT Survey Requirement	3
<b>Units</b>		<b>15</b>
<b>Year 1 Term 2</b>		
CSCI-208	Java Programming	4
MATH-181C	Calculus II	4
CORE-ARHU1	History/Political Science Requirement	3
CORE-SCI2	Science Fitness and Wellness Requirement	3
CORE-THEO1	Theology Intro Requirement	3
<b>Units</b>		<b>17</b>
<b>Year 2 Term 1</b>		
CSCI-205	Cybersecurity	3
CSCI-218	Python Programming	4
CSCI-317	Data Structures	4
MATH-265C	Intro to Statistical Methods	3
CORE-ENGL3	Speech Composition and Presentation Requirement	3
<b>Units</b>		<b>17</b>
<b>Year 2 Term 2</b>		
CSCI-216	Introduction to Web Programming	3
CSCI-217	Database Systems 1	3
MATH-285	Introduction to Advanced Mathematics	3
CORE-SOBS1	Social/Behavioral Science Requirement 1	3

CORE-THEO3	OT Survey Requirement	3
<b>Units</b>		<b>15</b>
<b>Year 3 Term 1</b>		
MATH-300	Linear Algebra	3
MATH-375	Discrete Mathematics	3
CORE-ARHU3	Fine Arts/Philosophy Requirement	3
CORE-ENGL2	Researched Writing Requirement	3
CORE-SOBS2	Social/Behavioral Science Requirement 2	3
<b>Units</b>		<b>15</b>
<b>Year 3 Term 2</b>		
CSCI-302	Algorithm Design and Applications	3
CSCI-305	Programming Languages	3
CSCI-325	Introduction to Networks	4
CSCI-425	Computing Theory	3
CORE-THEO4	Christian Worldview Requirement	3
<b>Units</b>		<b>16</b>
<b>Year 4 Term 1</b>		
CSCI-330	Introduction to Operating Systems	3
CSCI-415	Computer Architecture	3
CSCI-ELECT	CSCI/MATH Elective	3
CORE-SCI1	Science and Lab Requirement	4
<b>Units</b>		<b>13</b>
<b>Year 4 Term 2</b>		
CSCI-411	Software Engineering 1	3
CSCI-499C	Computer Science Capstone	3
CORE-ARHU2	Literature Requirement	3
CORE-THEO5	Christian Heritage Requirement	3
<b>Units</b>		<b>12</b>
<b>Total Units</b>		<b>120</b>

